

REMARKS**1. Claim Amendments.**

The claims have been reviewed and amended for clarity. More specifically, the claims have been amended to place them in better English, to conform to USPTO preferred practice, and to more precisely capture Applicant's invention. No new matter has been added to the claims.

Amended independent Claim 1 generally is a combination of previous Claims 1 and parts of previous Claims 4 and 8, with some subject matter taken from the Specification at page2, line 16 et seq. Dependent Claims 2-7 and 9 have been amended for clarity and depend ultimately from Claim 1. No new matter has been added.

Amended independent Claim 10 generally is a combination of previous Claims 10, 12, and 14. Dependent Claims 11 and 13-17 have been amended for clarity and depend ultimately from Claim 10. No new matter has been added.

Claims 8, 12, and 18-29 have been canceled.

New claims 30-42 are claims based on original claims 1-29 and are fully supported by the Specification. More specifically, new Claims 30-42 are identical to some of the amended dependent claims, with their dependencies changes. New Claims 30-73 ultimately depend from Claim 1 and new Claims 38-42 ultimately depend from Claim 10. No new matter has been added.

Applicant has submitted previously payment 29 total claims and 3 independent claims. The amendments to the claims result in 28 total claims and 2 independent claims, so no additional excess claims fee is due.

2. Explanation of the Invention.

To assist the examiner, the invention includes a method and an apparatus for testing cuboid-shaped cigarette packages made from a formable package material. As disclosed, the method entails impinging the cigarette packs with a defined pressure from a pressure-exerting means that is lowered onto the cigarette packs in a uniform motion. During this uniform motion, the distance depressed by the pressure-exerting means and the resistance force, i.e. the counterforce exerted by the cigarette pack against the pressure exerting means, are measured and analyzed. Specifically, the data or measured values are used to plot a force versus distance

diagram, which is compared to force versus distance diagrams of other cigarette packs (such as a reference cigarette pack) to draw conclusions concerning the various parameters or characteristics of the tested pack. It has been found that particularly accurate conclusions can be drawn from the force versus distance diagrams as a plotted curve and from the second derivative of the curve.

Further, the apparatus can execute the method and, in a preferred embodiment, has a position sensor arranged on the displaceable pressure-exerting means and a load cell on a second pressure-exerting means. This results in a particularly advantageous testing device.

3. 35 USC 103 Rejections.

Claims 1-17 (Claims 18-29 have been canceled) have been rejected under 35 USC 103 as being obvious over Focke '409, Fenlon '476 and/or Graudejus '124. Claims 1, 10 and all claims dependant therefrom are not obvious over under 35 USC 103 over Focke '409, Fenlon '476, and/or Graudejus '124. As clarified, Claims 1-17 disclose and claim a method and apparatus patentably distinct from and nonobvious over the cited art.

For a claim to be determined obvious (or nonobvious) under 35 USC 103, the claimed material must have been obvious to person of ordinary skill in the art from the prior art. An obviousness determination requires examining (1) the scope of the prior art, (2) the *level of skill* in the art, and (3) the *differences* between the prior art and Applicant's invention. *Litton Systems, Inc. v. Honeywell, Inc.*, 117 SCt 1270 (1970). A mere suggestion to further experiment with disclosed principles would not render obvious an invention based on those principles. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 19 USPQ2d 1432 (Fed. Cir. 1991). In fact, an applicant may use a reference as a basis for further experimentation and to create the invention. *Id.*

The fact that each element in a claimed invention is old or unpatentable does not determine the nonobviousness of the claimed invention as a whole. See *Custom Accessories, Inc., v. Jeffrey-Allan Industries*, 1 USPQ2d 1196 1986 (Fed. Cir. 1986). The prior art must not be given an overly broad reading, but should be read in the context of the patent specifications and as *intended by reference authors*. *Durling v. Spectrum Furniture Co.*, 40 USPQ2d 1788 (Fed Cir 1996) (Federal Circuit held that district court erred by giving a "too broad an interpretation" of claims in a sofa patent to invalidate another on the nonobviousness standard). The Federal Circuit has made it

clear that the nonobviousness standard is applied wrongly if a court or an examiner improperly focuses on "a combination of old elements" rather than the invention as a whole. *Custom Accessories, Inc.*, 1 USPQ2d 1196 (Fed. Cir. 1986). Applying the nonobviousness test counter to these principles counters the principle that a patent application is presumed nonobvious. *Id.*

Further, to sustain a rejection under 35 USC 103, the examiner must establish a *prima facie* case of obviousness. MPEP §2142. To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP §2143. This is not the case with the cited art.

Claims 1, 10 or any claim dependant therefrom are not obvious over Focke '409, Fenlon '476, and/or Graudejus '124 because these claims are patentably distinct from the cited references and any combination of the cited references. Claim 1 (summarily) claims a method for testing at least one cubio-shaped cigarette pack (10) by:

- a) applying a course of force on the pack (10) by lowering a pressure-exerting means (26) onto the cigarette pack (10) so the deform the pack (10),
- b) obtaining measured values by continuously measuring, during the deformation of the pack (10), the distance that the pack (10) is deformed with a first measuring device (31) and the resistance force of the pack (10) against the pressure-exerting means (26) with a second measuring device (28),
- c) constructing a force versus distance diagram from the measured values, and
- d) comparing the force versus diagram with at least one other force versus distance diagram of the same or similar packs.

Claim 10 is an apparatus for executing the method and the claims dependent from Claims 1 or 10 provide further limitations thereto.

Focke '409 and Fenlon '476

Focke '409 discloses a process for the testing of carton cigarette packs for correct adhesion connection or for correct adhesive bonding in the folding tabs of the carton packs that are glued with adhesive strips. For this testing purpose, a pressure girder (76, 77) exerts pressure on the top side of the carton pack (see e.g. FIG. 7) and if the adhesive bond 51 is not able to withstand the pressure (i.e. is faulty), the adhesive strip separates from a folding tab of the carton pack. This separated tab obstructs the light transmitter 81, which triggers a signal indicating the

pack is faulty. In any event, the force upon the pack or the distance pressed upon the pack is not measured or further analyzed as part of the method, which inherently means that there is no disclosure of a load cell or a of position cell as in Claim 10 of the present patent application.

Fenlon '476 discloses a method and apparatus for testing for leaks in gas or liquid filled packages to determine whether the gas or liquid can escape or withstand a reference pressure. While the method does involve applying pressure to the gas or liquid filled package and taking a position measurement, such a method only involves using this single measurement to reach the conclusion as to whether the package is leak proof, which is determined exclusively by the final position of the test element resting on the package in its lowered position. In fact, Fenlon '476 does not use continuous measurements, which are taken during the deformation of the package, of the respective of distance traveled by the pressure exerting means or of the respective force (or counterforce) exerted by the package against the pressure exerting means as the pressure exerting means travels.

In fact, Fenlon '476, while it relates to the testing of packages, discloses a completely different invention that would not be referenced by those of ordinary skill in the cigarette packaging art, or combined with cigarette packaging art devices or methods, to render obvious Claims 1, 10 or any claims dependant therefrom. As pointed out, Fenlon '476 discloses a method for testing packages (e.g. food containing packages) with **gas or liquid** for leakage while, to the contrary, the present invention is a method for testing cigarette packs. In fact, even the prior art cited in Fenlon '476 does not relate to cigarette packs, which objectively suggests that the arts are not ordinarily combined. As packages filled with gas or liquids behave completely differently from cigarette packages, one of ordinary skill in the relevant art would not look to Fenlon '476 to solve problems related to cigarette packs without an impetus provided by an inventive step, such as the inventive step of the present invention.

Even assuming without conceding that Fenlon '476 and Focke '409 could be combined by a person of ordinary skill in the art, neither reference alone nor jointly discloses or renders obvious a method or apparatus as claimed in Claims 1, 10 or any claims dependant therefrom. More particularly, the Fenlon '409 method would prove unsuitable for testing cigarette packs because such a method inherently lacks precision. Gas or liquid filled packages that are faulty produce a more extreme or

distinct signal because gas or liquid is forced out of the package when compressed by the element. Contradistinctively, faulty cigarette packs produce a less defined reaction - the final position of the pressure plate can be the same for a faulty and for a non-faulty cigarette pack. In fact, it is possible that the weaknesses in the cigarette pack walls will not alter the final position of the pressure stamp caused by the pre-selected pressure. Because such differences are only marginal with respect to cigarette packs, Applicant through its novel method (and apparatus) found that testing of such packs requires the measuring of the distance traveled by the pressure-exerting means and the counterforce exerted against the pressure-exerting means. As such, a combination of Focke '409 and Fenlon '476 teaches away from the present invention and more particularly away from a limitation of taking continual measurements during the course of force by the pressure exerting means (26).

For these reason, the combination of Focke '409 and Fenlon '476 cannot anticipate Claim 1-17.

Focke '409, Fenlon '476, and Graudejus '124

Turning now to Graudejus '124, Graudejus '124 discloses a method and apparatus for determining the filling capacity and hardness of cigarettes and not a method or apparatus for testing cigarette packs. Similar to Fenlon '476, the method in Graudejus '124 involves only the measurement of the final position of the plunger 8, which is not determined until the lower movement of the plunger 8 is complete (column 4, lines 45-54), and is followed by a determination of the final position after an automatically occurring relaxation process of tobacco. *Cf. e.g.* column 14, lines 29-34. These final positions and other parameters are used to calculate the hardness of the compressed tobacco and not the package.

Even assuming without conceding that Fenlon '476, Focke '409 and Graudejus '124 would be combined by a person of ordinary skill in the art, such a combination could not possibly render obvious a method or apparatus that includes the determination of a force versus distance diagram constructed from measurements taken during the deformation of the cigarette packs. Specifically, such a combination of references does not teach creating a method or apparatus that utilizes continual measurements of the pressure-exerting means during its course of travel and creating a force-distance diagram. Further, this combination does not teaching comparing the results with results from a reference cigarette pack.

Without Applicant's inventive step, one of ordinary skill in the art would not fathom Applicant's invention.

In summary, Applicant submits that its invention as claimed in Claims 1, 10 and all claims dependent therefrom is not obvious over Focke 409, Fenlon '476 and/or Graudejus '124. Specifically, as claimed in Claim 1 and 10 (and consequently in all claims dependant therefrom), Applicant's invention requires taking measurements during the course of course of force exerted by the pressure-exerting means and preparing a force-distance diagram. As discussed, Applicant's invention as claimed in the claims and all claims dependant therefrom is not obvious over the cited references.


For these reasons, Applicant request that the examiner withdraw his objections to Claims 1-17.

CONCLUSION

Applicant believes it has fully addressed the examiner's concerns and the claims are in condition for allowance, and Applicant respectfully requests such action.

If the examiner has any final concerns that can be addressed over the telephone, the examiner is invited to contact the below-signed attorney of record.

Respectfully submitted,


Laurence P. Colton
Reg. No. 33,371

TECHNOPROP COLTON LLC
PO Box 567685
Atlanta GA 31156-7685 US

Tel: 770.522.9762
Fax: 770.522.9763
E-Mail: technoprop@technoprop.com